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EXAMINER

JONES, HEATHER RAE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/036,182	Applicant(s) LAAKSONEN, MIKA H.	
	Examiner HEATHER R. JONES	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-12,14-19 and 22-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-12,14-19 and 22-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 27, 2010 has been entered.

Response to Arguments

2. Applicant's arguments filed May 27, 2010 have been fully considered but they are not persuasive.

The Applicant argues that neither Takemura nor Sato teaches that "the most recent information regarding the adjustments is stored in a lossy format comment field of the data unit". The Examiner respectfully disagrees. Takemura discloses in col. 8, lines 47-50 that the finish information (which is the most recent information regarding the adjustments) may be attached to the image data by defining a file format including both the image data and the finish information and forming data according to the format, which is interpreted by the Examiner to mean that both the image data and the finish information is formatted using the same format. However, Takemura fails to disclose that the format is a lossy format. The Sato reference is then referenced to disclose a file having a lossy format (col. 3, lines 24-29), wherein the file as can be seen in Fig. 2 is a file

comprising both an image data area (M1) and a comment field (M2). Therefore, the combination of the Takemura and Sato references meet the claimed limitations.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 2, 4-6, 8, 9, and 31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1, 2, 4-6, 8, 9, and 31 define a data unit for storage embodying functional descriptive material. However, the claim does not define a non-transitory computer readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" - Guidelines Annex IV). That is, the scope of the presently claimed data unit for storage can range from paper on which the program is written, to a program simply contemplated and memorized by a person. In the state of the art, transitory signals are commonplace as a medium for transmitting computer instruction and thus, in the absence of any evidence to the contrary and give the broadest reasonable interpretation; the scope of a "data unit for storage" covers a signal per se. In order to overcome the 101, the "data unit for storage" should be changed to "non-transitory computer-readable medium".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4-6, 8-12, 14-19, and 22-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura (U.S. Patent 6,657,658) in view of Sato (U.S. 6,650,365).

Regarding claim 1, Takemura discloses a data unit for storage of image or audio data so that an image or an audio representation can be represented based on the image or audio data, the data unit comprising: the image or audio and most recent information (finishing information) regarding adjustments that have been made to the image or audio representation after the image or audio data was input in the data unit, wherein the most recent information (finishing information) regarding the adjustments is stored in the comment field of the data unit, and wherein the image or audio representation is stored on the data unit without reflecting the adjustments that have been made thereto (Fig. 6; col. 8, lines 22-56 – the image data and the finishing information are stored separately and the image data is the original image data as can be seen from Fig. 6). However, Takemura fails to disclose that the image data and comment field are stored in a lossy format.

Referring to the Sato reference, Sato discloses in Fig. 2 an example of the allocation of data areas of an image file formed in the memory card.

Furthermore, Sato discloses that the image file is compressed according to the JPEG algorithm (col. 3, lines 24-29). It is well known in the art that it is a component of JPEG that the data is stored in a lossy format.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have stored the image as in a lossy format as disclosed by Sato in the device disclosed by Takemura in order to take advantage of the lossy compression algorithms which takes the limitations of the human eye into account and discards information that cannot be seen, which allows the image to be further compressed and reduces the file size.

Regarding claim **2**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 1 as well as disclosing that the data unit comprises at least two fields such that said lossy format comment field is separate from a field in which said image or audio data is stored (Takemura: col. 8, lines 47-56; Sato: Fig. 2; col. 3, lines 24-29).

Regarding claim **4**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 1 including that the data unit being adapted to provide information regarding changes that are to be made to the image or the audio presentation before representation thereof (Takemura: col. 8, line 57 - col. 9, line 21 - as can be seen from Fig. 6 that before the final image is printed it undergoes image processing).

Regarding claim **5**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 1 including that the data unit comprises compressed image or audio data (Takemura: col. 8, lines 22-56).

Regarding claim **6**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 1, as well as disclosing that the data unit comprises an image data field (Takemura: col. 8, lines 47-56).

Regarding claim **8**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 1, including that the image data field comprises a JPEG file or similar (Sato: col. 3, lines 24-29).

Regarding claim **9**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claims 1 and 6 as well disclosing a data unit wherein the adjustments relate to one or more of the following adjustments: brightness of the image; contrast of the image; white balance of the image; gamma correction of the image; boundaries of the image; sharpening of the image; or quality of the image (Takemura: col. 8, lines 10-22).

Regarding claim **10**, Takemura discloses a device, comprising: a storage for storing image data associated with an image, along with most recent information (finishing information) regarding adjustments made to the image data after the data was stored into the storage in a data unit, wherein the image data is stored without reflecting the adjustments that have been made thereto; and wherein the most recent information (finishing information) regarding the adjustments is stored in a comment field of the data unit; and a processor (33) for

processing the image data based at least in part on said most recent information (finishing information), said most recent information (finishing information) regarding the adjustments being indicative of changes to be made to the image data before the image is displayed on a display (45) (Figs. 6 and 8; col.10, lines 20-36). However, Takemura fails to disclose that the image data and comment field are stored in a lossy format.

Referring to the Sato reference, Sato discloses in Fig. 2 an example of the allocation of data areas of an image file formed in the memory card.

Furthermore, Sato discloses that the image is compressed according to the JPEG algorithm (col. 3, lines 24-29). It is well known in the art that it is a component of JPEG that the data is stored in a lossy format.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have stored the image as in a lossy format as disclosed by Sato in the device disclosed by Takemura in order to take advantage of the lossy compression algorithms which takes the limitations of the human eye into account and discards information that cannot be seen, which allows the image to be further compressed and reduces the file size.

Regarding claim **11**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 10 as well as disclosing a device wherein the processor (33) is adapted to change at least one of the following features of the image based at least in part on said most recent information (finishing information) regarding the adjustments: brightness of the image;

contrast of the image; white balance of the image; gamma correction of the image; boundaries of the image; sharpening of the image; or quality of the image (Takemura: col. 8, lines 10-22; col. 10, lines 20-36).

Regarding claim **12**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 10 including that the changes in the image to be displayed do not affect the image data stored in the storage (Takemura: col. 8, lines 30-46).

Regarding claim **14**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 10 including a device wherein the processor (33) is adapted to change the information indicative of the changes in the image (Takemura: col. 12, lines 36-41).

Regarding claim **15**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 10 as well as disclosing that the device comprises a portable device (Takemura: the digital camera in Fig 6 is portable).

Regarding claim **16**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 10 including that the device comprises a mobile station (Takemura: the digital camera in Fig. 6 is mobile).

Regarding claim **17**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 10 including that the device comprising a digital camera (Takemura: Fig. 6).

Regarding claim **18**, Takemura discloses a method of displaying an image, comprising: storing image data associated with the image in a data storage within an image data field of an image data storage unit; storing, in the data storage, most recent information (finishing information) indicative of modifications made to the image after storing of the image data so that said most recent information (finishing information) indicative of modifications can be fetched when the image is to be displayed by a display device, wherein said most recent information (finishing information) indicative of modifications is stored in a format comment field of the image data storage unit, and wherein the modifications are not reflected in the image data stored in the data storage; and modifying the image based on said most recent information (finishing information) indicative of modifications; and displaying the modified version of the image (Fig. 6; col. 8, lines 22-56 – the image data and the finishing information are stored separately and the image data is the original image data as can be seen from Fig. 6). However, Takemura fails to disclose that the image data and comment field are stored in a lossy format.

Referring to the Sato reference, Sato discloses in Fig. 2 an example of the allocation of data areas of an image file formed in the memory card. Furthermore, Sato discloses that the image is compressed according to the JPEG algorithm (col. 3, lines 24-29). It is well known in the art that it is a component of JPEG that the data is stored in a lossy format.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have stored the image as in a lossy format as disclosed by Sato in the device disclosed by Takemura in order to take advantage of the lossy compression algorithms which takes the limitations of the human eye into account and discards information that cannot be seen, which allows the image to be further compressed and reduces the file size.

Regarding claim **19**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 18 a method wherein said image data field of the image data storage unit is separate from the lossy format comment field of the image data storage unit (Takemura: col. 8, lines 47-56; Sato: Fig. 2; col. 3, lines 24-29).

Regarding claim **22**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 18 as well as disclosing a method wherein the modification comprises modification of at least one of the following features of the image: brightness of the image; contrast of the image; white balance of the image; gamma correction of the image; boundaries of the image; sharpening of the image; or quality of the image (Takemura: col. 8, lines 10-22; col. 10, lines 20-36).

Regarding claim **23**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 18 as well as disclosing a method wherein the most recent information indicative of the modifications of the image

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is stored while the image data remains substantially unchanged after the image has been modified (Takemura: col. 8, lines 30-46).

Regarding claim **24**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 18, but fails to disclose a method comprising the steps of: dividing the image area into a plurality of image blocks before the step of storing the image data; compressing the image data in each of the image blocks separately; storing the compressed image blocks in the data storage means; selecting at least one of the image data blocks to be fetched from the data storage means based on the information indicative of modifications; fetching the selected at least one image data block from the data storage means; decompressing the at least one fetched image data block; and displaying the content of the decompressed at least one image data block.

Official Notice is taken to store image data using JPEG compression and the process described above is part of JPEG compression. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have stored the image using JPEG compression because JPEG provides low complexity and utilizes memory efficiently.

Regarding claim **25**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 18, but fails to disclose a method wherein the selection of the image data blocks is accomplished to adjust the size of the image area to be displayed. Official Notice is taken that cropping may be used to alter an image and that it is a well-known technique. Furthermore,

Takemura allows the user to select either portrait or landscape as finishing information which require cropping the image. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the size of the image to be displayed by using a cropping technique and saving this parameter in the comment field in order to display only a portion of the image to further enhance the details in that region of the original image. By saving a cropping parameter the original image would still be saved as well in order to allow the user to restore the image to its original shape at any point in time.

Regarding claim **26**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 18 as well as disclosing a method wherein the image is one of a plurality of images that are displayed in succession (Takemura: it is inherent that the image is one of a plurality of images to be displayed when more than one image has been taken because the user may scroll through the saved images).

Regarding claim **27**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claims 18 and 26 including that each image of the plurality of images is provided with information indicative of modifications made to the image (Takemura: as be seen from Fig. 6 each image has a comment field attached to the image field).

Regarding claim **28**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claims 18 and 26 as well as disclosing a

method wherein at least one image of the plurality of images is provided with information indicative of modifications made to the image, and wherein at least one other image of the plurality of images is modified based on the information (Takemura: it is inherent that at least one other image of a plurality of images is modified based on the information from another image; when a user finds the correct parameters to enhance an image for a particular venue then all the images taken at that venue would be taken using the same parameters).

Regarding claim **29**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 18 including that the image is displayed on a screen (LCD) of a portable display device (digital camera) (Takemura: Fig. 6 – the image is displayed on the camera to make the original adjustments).

Regarding claim **30**, Takemura in view of Sato discloses all the limitations as previously discussed with respect to claim 18 including that the image data is transmitted to the display device over a wireless interface (Takemura: col. 8, lines 57-67).

Regarding claim **31**, Takemura discloses a data unit for storage of image or audio data associated with an image or audio representation, comprising the image or audio data and most recent information (finishing information) regarding adjustments to the image or audio representation, wherein the most recent information (finishing information) regarding the adjustments is stored in a comment field of the data unit, and wherein the image or audio representation is

stored on the data unit without reflecting the adjustment to be made thereto (Fig. 6; col. 8, lines 22-56 – the image data and the finishing information are stored separately and the image data is the original image data as can be seen from Fig. 6). However, Takemura fails to disclose that the image data and comment field are stored in a lossy format.

Referring to the Sato reference, Sato discloses in Fig. 2 an example of the allocation of data areas of an image file formed in the memory card. Furthermore, Sato discloses that the image is compressed according to the JPEG algorithm (col. 3, lines 24-29). It is well known in the art that it is a component of JPEG that the data is stored in a lossy format.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have stored the image as in a lossy format as disclosed by Sato in the device disclosed by Takemura in order to take advantage of the lossy compression algorithms which takes the limitations of the human eye into account and discards information that cannot be seen, which allows the image to be further compressed and reduces the file size.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEATHER R. JONES whose telephone number is (571)272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heather R Jones
Examiner
Art Unit 2621

HRJ
June 16, 2010

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621